Abstract

A quick-action cylinder with a safety device preventing blocking is described, which provides for a mechanical lock for a center draw-in nipple in a center bore in a housing of a quick-action cylinder, wherein in the locked position one or more locking members are urged into contact with an exterior periphery of the draw-in nipple by the force from a spring assembly. The spring assembly is arranged in the housing in one or several spring compartments, and the unlocked position of the draw-in nipple is attained by applying pressure to a locking piston which operates to oppose the force of the spring assembly.

The safety device prevents self-blocking of the locking assembly of the draw-in nipple in the center bore if the pressure medium enters the spring compartment of the spring assembly from the cylinder space of the locking piston. For this purpose, a relief bore is disposed in the spring compartment, extending to a lower-pressure clearance space. One or more pressure elements are arranged in the region of the relief bore which are brought into an open position in the event of an overpressure in the spring compartment, thereby discharging the pressure medium from the spring compartment.